FIGURE 1

BFA4 cDNA Sequence

ATGGTCCGGAAAAAGAACCCCCCTCTGAGAAACGTTGCAAGTGAAGGCGAGGGCCAGATCCTGGAGCCTATAGGTACAGAAAGCAA
GGTATCTGGAAAGAACAAAGAATTCTCTGCAGATCAGATGTCAGAAAATACGGATCAGAGTGATGCTGCAGAACTAAATCATAAGGA

5 GGAACATAGCTTGCATGTTCAAGATCCATCTTCTAGCAGTAAGAAGGACTTGAAAAGCGCAGTTCTGAGTGAGAAGGCTGGCTTCAA
TTATGAAAGCCCCAGTAAGGGAGGAAACTTTCCCTCCTTTCCGCATGATGAGGTGACAGACAGAAATATGTTGGCTTTCTCATTTCC
AGCTGCTGGGGGAGTCTGTGAGCCCTTGAAGTCTCCGCAAAGAGCAGAGGCAGATGACCCTCAAGATATGGCCTGCACCCCCTCAGG
GGACTCACTGGAGACAAAGGAAGATCAGAAGATGTCACCAAAGGCTACAGAGGAAACAGGGCAAGCACAGAGTGGTCAAGCCAATTG
TCAAGGTTTGAGCCCAGTTTCAGTGGCCTCAAAAAACCCACAAGTGCCTTCAGATGGGGGTGTAAGACTGAATAAATCCAAAACTGA

10 CTTACTGGTGAATGACAACCCAGACCCGGCACCTCTGTCTCCAGAGCTTCAGGACTTTAAATGCAATATCTGTGGATATGGTTACTA
CGGCAACGACCCCACAGATCTGATTAAGCACTTCCGAAAGTATCACTTAGGACTGCATAACCGCACCAGGCAAGATGCTGAGCTGGA
CAGCAAAATCTTGGCCCTTCATAACATGGTGCAGTTCAGCCATTCCAAAGACTTCCAGAAGGTCAACCGTTCTGTGTTTTCTGGTGT
GCTGCAGGACATCAATTCTTCAAGGCCTGTTTTACTAAATGGGACCTATGATGTGCAGGTGACTTCAGGTGGAACATTCATTGGCAT
TGGACGGAAAACACCAGATTGCCAAGGGAACACCAAGTATTTCCGCTGTAAATTCTGCAATTTCACTTATATGGGCAACTCATCCAC

15 CGAATTAGAACAACATTTTCTTCAGACTCACCCAAACAAAATAAAAGCTTCTCTCCCCTCCTCTGAGGTTGCAAAACCTTCAGAGAA
AAACTCTAACAAGTCCATCCCTGCACTTCAATCCAGTGATTCTGGAGACTTGGGAAAATGGCAGGACAAGATAACAGTCAAAGCAGG
AGATGACACTCCTGTTGGGTACTCAGTGCCCATAAAGCCCCTCGATTCCTCTAGACAAAATGGTACAGAGGCCACCAGTTACTACTG
GTGTAAATTTTGTAGTTTCAGCTGTGAGTCATCTAGCTCACTTAAACTGCTAGAACATTATGGCAAGCAGCACGGAGCAGTGCAGTC
AGGCGGCCTTAATCCAGAGTTAAATGATAAGCTTTCCAGGGGCTCTGTCATTAATCAGAATGATCTAGCCAAAAGTTCAGAAGGAGA

20 GACAATGACCAAGACAGACAAGAGCTCGAGTGGGGCTAAAAAGAAGGACTTCTCCAGCAAGGGAGCCGAGGATAATATGGTAACGAG
CTATAATTGTCAGTTCTGTGACTTCCGATATTCCAAAAGCCATGGCCCTGATGTAATTGTAGTGGGGCCACTTCTCCGTCATTATCA
ACAGCTCCATAACATTCACAAGTGTACCATTAAACACTGTCCATTCTGTCCCAGAGGACTTTGCAGCCCAGAAAAGCACCTTGGAGA
AATTACTTATCCGTTTGCTTGTAGAAAAAGTAATTGTTCCCACTGTGCACTCTTGCTTCTGCACTTGTCTCCTGGGGCGGCTGGAAG
CTCGCGAGTCAAACATCAGTGCCATCAGTGTTCATTCACCACCCCTGACGTAGATGTACTCCTCTTTCACTATGAAAGTGTGCATGA

25 GTCCCAAGCATCGGATGTCAAACAAGAAGCAAATCACCTGCAAGGATCGGATGGGCAGCAGTCTGTCAAGGAAAGCAAAGAACACTC
ATGTACCAAATGTGATTTTATTACCCAAGTGGAAGAAGAGATTTCCCGACACTACAGGAGAGCACACAGCTGCTACAAATGCCGTCA
GTGCAGTTTTACAGCTGCCGATACTCAGTCACTACTGGAGCACTTCAACACTGTTCACTGCCAGGAACAGGACATCACTACAGCCAA
CGGCGAAGAGGACGGTCATGCCATATCCACCATCAAAGAGGAGCCCAAAATTGACTTCAGGGTCTACAATCTGCTAACTCCAGACTC
TAAAATGGGAGAGCCAGTTTCTGAGAGTGTGGTGAAGAGAGAGAAGCTGGAAGAGAAGGACGGGCTCAAAGAGAAAGTTTGGACCGA

30 GAGTTCCAGTGATGACCTTCGCAATGTGACTTGGAGAGGGGCAGACATCCTGCGGGGGAGTCCGTCATACACCCAAGCAAGCCTGGG
GCTGCTGACGCCTGTGTCTGGCACCCAAGAGCAGACAAAGACTCTAAGGGATAGTCCCAATGTGGAGGCCGCCCATCTGGCGCGACC
TATTTATGGCTTGGCTGTGGAAACCAAGGGATTCCTGCAGGGGGCGCCAGCTGGCGGAGAGAAGTCTGGGGCCCTCCCCCAGCAGTA
TCCTGCATCGGGAGAAAACAAGTCCAAGGATGAATCCCAGTCCCTGTTACGGAGGCGTAGAGGCTCCGGTGTTTTTGTGCCAATTG
CCTGACCACAAAGACCTCTCTCTGGCGAAAGAATGCAAATGGCGGATATGTATGCAACGCGTGTGGCCTCTACCAGAAGCTTCACTC

35 GACTCCCAGGCCTTTAAACATCATTAAACAAAACAACGGTGAGCAGATTATTAGGAGGAGAACAAGAAAGCGCCTTAACCCAGAGGC
ACTTCAGGCTGAGCAGCTCAACAAACAGCAGAGGGGCAGCAATGAGGAGCAAGTCAATGGAAGCCCGTTAGAGAGGAGGTCAGAAGA
TCATCTAACTGAAAGTCACCAGAGAGAAATTCCACTCCCCAGCCTAAGTAAATACGAAGCCCAGGGTTCATTGACTAAAAGCCATTC
TGCTCAGCAGCCAGTCCTGGTCAGCCAAACTCTGGATATTCACAAAAGGATGCAACCTTTGCACATTCAGATAAAAAGTCCTCAGGA
AAGTACTGGAGATCCAGGAAATAGTTCATCCGTATCTGAAGGGAAAGGAAGTTCTGAGAGAGGCAGTCCTATAGAAAAGTACATGAG

40 ACCTGCGAAACACCCAAATTATTCACCACCAGGCAGCCCTATTGAAAAGTACCAGTACCCACTTTTTGGACTTCCCTTTGTACATAA
TGACTTCCAGAGTGAAGCTGATTGGCTGCGGTTCTGGAGTAAATATAAGCTCTCCGTTCCTGGGAATCCGCACTACTTGAGTCACGT
GCCTGGCCTACCAAATCCTTGCCAAAACTATGTGCCTTATCCCACCTTCAATCTGCCTCCTCATTTTTCAGCTGTTGGATCAGACAA
TGACATTCCTCTAGATTTGGCGATCAAGCATTCCAGACCTGGGCCAACTGCAAACGGTGCCTCCAAGGAGAAAACGAAGGCACCACC
AAATGTAAAAAATGAAGGTCCCTTGAATGTAGTAAAAACAGAGAAAGTTGATAGAAGTACTCAAGATGAACTTTCAACAAAATGTGT

45 GCACTGTGGCATTGTCTTTCTGGATGAAGTGATGTATGCTTTGCATATGAGTTGCCATGGTGACAGTGGACCTTTCCAGTGCAGCAT
ATGCCAGCATCTTTGCACGGACAAATATGACTTCACAACACATATCCAGAGGGGCCTGCATAGGAACAATGCACAAGTGGAAAAAAA
TGGAAAACCTAAAGAGTAA*

FIGURE 2

BFA4 Amino Acid Sequence

```
    MVRKKNPPLRNVASEGEGQILEPIGTESKVSGKNKEFSADQMSENTDQSDAAELNHKEEHSLHVQDPSSS
    SKKDLKSAVLSEKAGFNYESPSKGGNFPSFPHDEVTDRNMLAFSFPAAGGVCEPLKSPQRAEADDPQDMA
 5  CTPSGDSLETKEDQKMSPKATEETGQAQSGQANCQGLSPVSVASKNPQVPSDGGVRLNKSKTDLLVNDNP
    DPAPLSPELQDFKCNICGYGYYGNDPTDLIKHFRKYHLGLHNRTRQDAELDSKILALHNMVQFSHSKDFQ
    KVNRSVFSGVLQDINSSRPVLLNGTYDVQVTSGGTFIGIGRKTPDCQGNTKYFRCKFCNFTYMGNSSTEL
    EQHFLQTHPNKIKASLPSSEVAKPSEKNSNKSIPALQSSDSGDLGKWQDKITVKAGDDTPVGYSVPIKPL
    DSSRQNGTEATSYYWCKFCSFSCESSSSLKLLEHYGKQHGAVQSGGLNPELNDKLSRGSVINQNDLAKSS
10  EGETMTKTDKSSSGAKKKDFSSKGAEDNMVTSYNCQFCDFRYSKSHGPDVIVVGPLLRHYQQLHNIHKCT
    IKHCPFCPRGLCSPEKHLGEITYPFACRKSNCSHCALLLLHLSPGAAGSSRVKHQCHQCSFTTPDVDVLL
    FHYESVHESQASDVKQEANHLQGSDGQQSVKESKEHSCTKCDFITQVEEEISRHYRRAHSCYKCRQCSFT
    AADTQSLLEHFNTVHCQEQDITTANGEEDGHAISTIKEEPKIDFRVYNLLTPDSKMGEPVSESVVKREKL
    EEKDGLKEKVWTESSSDDLRNVTWRGADILRGSPSYTQASLGLLTPVSGTQEQTKTLRDSPNVEAAHLAR
15  PIYGLAVETKGFLQGAPAGGEKSGALPQQYPASGENKSKDESQSLLRRRRGSGVFCANCLTTKTSLWRKN
    ANGGYVCNACGLYQKLHSTPRPLNIIKQNNGEQIIRRRTRKRLNPEALQAEQLNKQQRGSNEEQVNGSPL
    ERRSEDHLTESHQREIPLPSLSKYEAQGSLTKSHSAQQPVLVSQTLDIHKRMQPLHIQIKSPQESTGDPG
    NSSSVSEGKGSSERGSPIEKYMRPAKHPNYSPPGSPIEKYQYPLFGLPFVHNDFQSEADWLRFWSKYKLS
    VPGNPHYLSHVPGLPNPCQNYVPYPTFNLPPHFSAVGSDNDIPLDLAIKHSRPGPTANGASKEKTKAPPN
20  VKNEGPLNVVKTEKVDRSTQDELSTKCVHCGIVFLDEVMYALHMSCHGDSGPFQCSICQHLCTDKYDFTT
    HIQRGLHRNNAQVEKNGKPKE
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FIGURE 3

A. BCY1 cDNA Sequence

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TGCAAGATTAAGGCCTTGAGGGCCAAGACCAACACCTACATCAAGACACCGGTGAGGGGCGAGGAACCAGTGTTCATG
GTGACAGGGCGACGGGAGGACGTGGCCACAGCCCGGCGGGAAATCATCTCAGCAGCGGAGCACTTCTCCATGATCCGT
GCCTCCCGCAACAAGTCAGGCGCCGCCTTTGGTGTGGCTCCTGCTCTGCCCGGCCAGGTGACCATCCGTGTGCGGGTG
CCCTACCGCGTGGTGGGGCTGGTGGTGGGCCCCAAAGGGGGCAACCATCAAGCGCATCCAGCAGCAAACCAACACATAC
ATTATCACACCAAGCCGTGACCGCGACCCCGTGTTCGAGATCACGGGTGCCCCAGGCAACGTGGAGCGTGCGCGCGAG
GAGATCGAGACGCACATCGCGGTGCGCACTGGCAAGATCCTCGAGTACAACAATGAAACGACTTCCTGGCGGGGAGC
CCCGACGCAGCAATCGATAGCCGCTACTCCGACGCCTGGCGGGTGCACCAGCCCGGCTGCAAGCCCCTCTCCACCTTC
CGGCAGAACAGCCTGGGCTGCATCGGCGAGTGCGGAGTGGACTCTGGCTTTGAGGCCCCACGCCTGGGTGAGCAGGGC
GGGGACTTTGGCTACGGCGGGTACCTCTTTCCGGGCTATGGCGTGGGCAAGCAGGATGTGTACTACGGCGTGGCCGAG
ACTAGCCCCCGCTGTGGGCGGGCCAGGAGAACGCCACGCCCACCTCCGTGCTCTTCTCCTCYKCCTCCTCCTCCTCC
TCCTCTTCCGCCAAGGCCCGCGCTGGGCCCCGGGCGCACACCGCTCCCCTGCCACTTCCGCGGGACCCGAGCTGGCC
GGACTCCCGAGGCGCCCCCCGGGAGAGCCGCTCCRGGGCTTCTCTAAACTTGGTGGGGGCGGCCTGCGGAGCCCCGCA
GCCGGCGGGCGGGATTGCATGGTCTGCTTTGAGAGCGAAGTGACTGCCGCCCTTGTGCCCTGCGGACACAACCTGTTC
TGCATGGAGTGTGCAGTACGCATCTGCGAGAGGACGGACCCAGAGTGTCCCGTCTGCCACATCACAGCCACGCAAGCC
ATCCGAATATTCTCCTAAGCCCCGTGCCCCATGCCTCCGGGGCCCACTCCACTGGGCCCACCCTGGACCTGTTTTCCA
CTAAAGCCTTTTGGAAAGCGGTGATTTGAGGGGCAAGGTGCTTAGAGATACTCGCTCGCTGGGGAAGGGGGGAGGGAG
GCAGTGGTGGCTGGAGGGTGCGCCACTTTCAGAGCCTCTGGTCACCCTGTCCTGGAAAGATTGGGAGGGGGCCAGACT
GAAAATTTTACTAGAGTTACAACTCTGATACCTCAACACACCCTTAAATCTGGAAGCAGCTAAGAGAAACTTTTGTTT
TGCCAGAGGTGGCCACTAAGGCATTCTGACGCCCTCTGCCCACCTCCCCCGCTGTGTGTCACTCCACCCCTTCTTCCG
AGGAGGGGGTGGGTAAAAGGGAGAGGGAGAATTACCACCTGTATCTAGAGGTGCTCTTTGCAATCCCTAAGCCCTCTG
GTCCTGACCTCCGACCTCCCAGCTCTGTCTTGTTCCTTGTCTTTGTCTTTCTTCCCTTCCCCCTGCCCCTGCCCCTAC
CAGCCCAGCTTTGGGGACACCATCCTTCTGGGGAGAAGTAGGGGGAGGAATATTTGGATGGTCCCTCCATTCCTCTTC
AGGCATCTGGAGGCCCTCTCCCCCACTCCTCCAAAGAAACATCTCAAATTATTGATGGAATGTATCCCCATTCTCAGT
GAAAATGTGAGGAGGGGACTAATACTGGGGTAAAGGGTCAAACCCCCACCTTCATCACTATGGGCATTATATTTAGGG
AGTAGTTCTTGGGCTGGATTTTCTGGTTGTGGAAGTGGGGGCGCCAGAGTAGTGTGTCTGCTATTTAAAGGAGCAGGA
AAGGGCGTGAGGCAGGAGGAGAGACTGGTGGAGGGAAGAGCTGCTCCTCCCATGCAGTGCCCGACTCCCTGCACCCCT
CTCAACCTGACCTGAACCTTTATTGAATCCTTATTAGCTTGAATCCTTATTAGCTTGAATCCTCCATGCAAATCATGG
AGTCTGTGTCCCACCTGATGTGGTTGAGGAGAAGCCAGGTCTTCAAAGAGGGGTCAGCCTGGGGCAAAGCAGGACTGG
GGGGAGGTGGGCAGCAGGGCCTATTCTGAGAATCACATATTGTTACAGGCCTTGCACCCCCTTTGCTGCTTCCCTCCT
GCTCATTTGGGGCTGCCACCAGCTCTCCACCCTCCTGGTTCCGCTGGCCGGGCCAAGAGAGGATGGAGGGATGGGAGT
CCCAGGAGATCCTTGTAAATAGTGGGGTGGGACTGTTCTGAGTGATCACCCGAGCACTTAAAGCTCCAGAGTCCCATT
CTTCCTGGATGGAGCAGGTGGAGGTGCAGAGGGGATTTCCTCCTCTCCTTCCTCCTGTCGAGAATTAACACCTCTCCA
CAGCCTTCCCCTCCAGAACACCAGCCAGGGAGGGGTGGGGAAGGAGGTCACAGCCAAGAAAACTGCCCTGTGACGACT
TCCCTCCTTCCCGCCTATGTGAGCCATCCTGAGATGTCTGTACAATAGAAACCAAACCAAATGGGCACCCTCGGTTGC
CGGGGGGCAGGTGGGGAGGGGGGTGGGAAGAAGGGATGTCTGTCTGTCGTCCCCCTCCCCCTCTCCACTCTTTACCCA
CAAAGGCAGAAGACTGTTACACTAGGGGGCTCAGCAAATTCAATCCCACCCTTACCAATTGAGCCAAACCTAGAAACA
AACACAAAACACGAATAGTGAGAGACAAAATAGAGGAGAGAAAGAGAGCATGAGAGGGAGCGAGACAGGCGACCAACA
CAGAGGAGAGAAACAAAAATAGCAAAAAAAAAAAAAAAAA
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B. BCY1 Amino Acid Sequence

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MAELRLKGSS  NTTECVPVPT  SEHVAEIVGR  QGCKIKALRA  KTNTYIKTPV  RGEEPVFMVT
GRREDVATAR  REIISAAEHF  SMIRASRNKS  GAAFGVAPAL  PGQVTIRVRV  PYRVVGLVVG
PKGATIKRIQ  QQTNTYIITP  SRDRDPVFEI  TGAPGNVERA  REEIETHIAV  RTGKILEYNN
ENDFLAGSPD  AAIDSRYSDA  WRVHQPGCKP  LSTFRQNSLG  CIGECGVDSG  FEAPRLGEQG
GDFGYGGYLF  PGYGVGKQDV  YYGVAETSPP  LWAGQENATP  TSVLFSSASS  SSSSSAKARA
GPPGAHRSPA  TSAGPELAGL  PRRPPGEPLQ  GFSKLGGGGL  RSPGGGRDCM
VCFESEVTAA  LVPCGHNLFC  MECAVRICER  TDPECPVCHI  TAAQAIRIFS
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FIGURE 4

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ATGACAAAGAGGAAGAAGACCATCAACCTTAATATACAAGACGCCCAGAAGAGGACTGCTCTACACTGGGCCTGTGTC
AATGGCCATGAGGAAGTAGTAACATTTCTGGTAGACAGAAAGTGCCAGCTTGACGTCCTTGATGGCGAACACAGGACA
CCTCTGATGAAGGCTCTACAATGCCATCAGGAGGCTTGTGCAAATATTCTGATAGATTCTGGTGCCGATATAAATCTC
GTAGATGTGTATGGCAACATGGCTCTCCATTATGCTGTTTATAGTGAGATTTTGTCAGTGGTGGCAAAACTGCTGTCC
CATGGTGCAGTCATCGAAGTGCACAACAAGGCTAGCCTCACACCACTTTTACTATCCATAACGAAAAGAAGTGAGCAA
ATTGTGGAATTTTTGCTGATAAAAAATGCAAATGCGAATGCAGTTAATAAGTATAAATGCACAGCCCTCATGCTTGCT
GTATGTCATGGATCATCAGAGATAGTTGGCATGCTTCTTCAGCAAAATGTTGACGTCTTTGCTGCAGATATATGTGGA
GTAACTGCAGAACATTATGCTGTTACTTGTGGATTTCATCACATTCATGAACAAATTATGGAATATATACGAAAATTA
TCTAAAAATCATCAAATACCAATCCAGAAGGAACATCTGCAGGAACACCTGATGAGGCTGCACCCTTGGCGGAAAGA
ACACCTGACACAGCTGAAAGCTTGGTGGAAAAAACACCTGATGAGGCTGCACCCTTGGTGGAAAGAACACCTGACACG
GCTGAAAGCTTGGTGGAAAAAACACCTGATGAGGCTGCATCCTTGGTGGAGGGAACATCTGACAAAATTCAATGTTTG
GAGAAAGCGACATCTGGAAAGTTCGAACAGTCAGCAGAAGAAACACCTAGGGAAATTACGAGTCCTGCAAAAGAAACA
TCTGAGAAATTTACGTGGCCAGCAAAAGGAAGACCTAGGAAGATCGCATGGGAGAAAAAAGAAGACACACCTAGGGAA
ATTATGAGTCCCGCAAAAGAAACATCTGAGAAATTTACGTGGGCAGCAAAAGGAAGACCTAGGAAGATCGCATGGGAG
AAAAAAGAAACACCTGTAAAGACTGGATGCGTGGCAAGAGTAACATCTAATAAAACTAAAGTTTTGGAAAAAGGAAGA
TCTAAGATGATTGCATGTCCTACAAAAGAATCATCTACAAAAGCAAGTGCCAATGATCAGAGGTTCCCATCAGAATCC
AAACAAGAGGAAGATGAAGAATATTCTTGTGATTCTCGGAGTCTCTTTGAGAGTTCTGCAAAGATTCAAGTGTGTATA
CCTGAGTCTATATATCAAAAAGTAATGGAGATAAATAGAGAAGTAGAAGAGCCTCCTAAGAAGCCATCTGCCTTCAAG
CCTGCCATTGAAATGCAAAACTCTGTTCCAAATAAAGCCTTTGAATTGAAGAATGAACAAACATTGAGAGCAGATCCG
ATGTTCCCACCAGAATCCAAACAAAAGGACTATGAAGAAAATTCTTGGGATTCTGAGAGTCTCTGTGAGACTGTTTCA
CAGAAGGATGTGTGTTTACCCAAGGCTACACATCAAAAAGAAATAGATAAAATAAATGGAAAATTAGAAGAGTCTCCT
AATAAAGATGGTCTTCTGAAGGCTACCTGCGGAATGAAAGTTTCTATTCCAACTAAAGCCTTAGAATTGAAGGACATG
CAAACTTTCAAAGCGGAGCCTCCGGGGAAGCCATCTGCCTTCGAGCCTGCCACTGAAATGCAAAAGTCTGTCCCAAAT
AAAGCCTTGGAATTGAAAAATGAACAAACATGGAGAGCAGATGAGATACTCCCATCAGAATCCAAACAAAAGGACTAT
GAAGAAATTCTTGGGATACTGAGAGTCTCTGTGAGACTGTTTCACAGAAGGATGTGTGTTTACCCAAGGCTGCGCAT
CAAAAAGAAATAGATAAAATAAATGGAAAATTAGAAGGGTCTCCTGTTAAAGATGGTCTTCTGAAGGCTAACTGCGGA
ATGAAAGTTTCTATTCCAACTAAAGCCTTAGAATTGATGGACATGCAAACTTTCAAAGCAGAGCCTCCCGAGAAGCCA
TCTGCCTTCGAGCCTGCCATTGAAATGCAAAAGTCTGTTCCAAATAAAGCCTTGGAATTGAAGAATGAACAAACATTG
AGAGCAGATGAGATACTCCCATCAGAATCCAAACAAAAGGACTATGAAGAAAGTTCTTGGGATTCTGAGAGTCTCTGT
GAGACTGTTTCACAGAAGGATGTGTGTTTACCCAAGGCTACACATCAAAAAGAAATAGATAAAATAAATGGAAAATTA
GAAGAGTCTCCTGATAATGATGGTTTTCTGAAGGCTCCCTGCAGAATGAAAGTTTCTATTCCAACTAAAGCCTTAGAA
TTGATGGACATGCAAACTTTCAAAGCAGAGCCTCCCGAGAAGCCATCTGCCTTCGAGCCTGCCATTGAAATGCAAAAG
TCTGTTCCAAATAAAGCCTTGGAATTGAAGAATGAACAAACATTGAGAGCAGATCAGATGTTCCCTTCAGAATCAAAA
CAAAAGAAGGTTGAAGAAAATTCTTGGGATTCTGAGAGTCTCCGTGAGACTGTTTCACAGAAGGATGTGTGTGTACCC
AAGGCTACACATCAAAAAGAAATGGATAAAATAAGTGGAAAATTAGAAGATTCAACTAGCCTATCAAAAATCTTGGAT
ACAGTTCATTCTTGTGAAGAGCAAGGGAACTTCAAAAAGATCACTGTGAACAACGTACAGGAAAAATGGAACAAATG
AAAAAGAAGTTTTGTACTGAAAAAAGAAACTGTCAGAAGCAAAAGAAATAAAATCACAGTTAGAGAACCAAAAAGTT
AAATGGGAACAAGAGCTCTGCAGTGTGAGATTGACTTTAAACCAAGAAGAAGAGAAGAAGAGAAATGCCGATATATTA
AATGAAAAAATTAGGGAAGAATTAGGAAGAATCGAAGAGCAGCATAGGAAAGAGTTAGAAGTGAAACAACAACTTGAA
CAGGCTCTCAGAATACAAGATATAGAATTGAAGAGTGTAGAAAGTAATTTGAATCAGGTTTCTCACACTCATGAAAAT
GAAAATTATCTCTTACATGAAAATTGCATGTTGAAAAAGGAAATTGCCATGCTAAAACTGGAAATAGCCACACTGAAA
CACCAATACCAGGAAAAGGAAATAAATACTTTGAGGACATTAAGATTTTAAAAGAAAAGAATGCTGAACTTCAGATG
ACCCTAAAACTGAAGAGGAATCATTAACTAAAAGGGCATCTCAATATAGTGGGCAGCTTAAAGTTCTGATAGCTGAG
AACACAATGCTCACTTCTAAATTGAAGGAAAAACAAGACAAAGAAATACTAGAGGCAGAAATTGAATCACACCATCCT
AGACTGGCTTCTGCTGTACAAGACCATGATCAAATTGTGACATCAAGAAAAAGTCAAGAACCTGCTTTCCACATTGCA
GGAGATGCTTGTTTGCAAAGAAAAATGAATGTTGATGTGAGTAGTACGATATATAACAATGAGGTGCTCCATCAACCA
CTTTCTGAAGCTCAAAGGAAATCCAAAAGCCTAAAAATTAATCTCAATTATGCAGGAGATGCTCTAAGAGAAAATACA
TTGGTTTCAGAACATGCACAAAGAGACCAACGTGAAACACAGTGTCAAATGAAGGAAGCTGAACACATGTATCAAAAC
GAACAAGATAATGTGAACAAACACACTGAACAGCAGGAGTCTCTAGATCAGAAATTATTTCAACTACAAAGCAAAAT
ATGTGGCTTCAACAGCAATTAGTTCATGCACATAAGAAAGCTGACAACAAAGCAAGATAACAATTGATATTCATTTT
CTTGAGAGGAAAATGCAACATCATCTCCTAAAAGAGAAAAATGAGGAGATATTTAATTACAATAACCATTTAAAAAAC
CGTATATATCAATATGAAAAAGAGAAAGCAGAAACAGAAAACTCATGA
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FIGURE 5

```
     MTKRKKTINLNIQDAQKRTALHWACVNGHEEVVTFLVDRKCQLDVLDGEHRTPLMKALQCHQEACANILIDSGADINL
 5   VDVYGNMALHYAVYSEILSVVAKLLSHGAVIEVHNKASLTPLLLSITKRSEQIVEFLLIKNANANAVNKYKCTALMLA
     VCHGSSEIVGMLLQQNVDVFAADICGVTAEHYAVTCGFHHIHEQIMEYIRKLSKNHQNTNPEGTSAGTPDEAAPLAER
     TPDTAESLVEKTPDEAAPLVERTPDTAESLVEKTPDEAASLVEGTSDKIQCLEKATSGKFEQSAEETPREITSPAKET
     SEKFTWPAKGRPRKIAWEKKEDTPREIMSPAKETSEKFTWAAKGRPRKIAWEKKETPVKTGCVARVTSNKTKVLEKGR
     SKMIACPTKESSTKASANDQRFPSESKQEEDEEYSCDSRSLFESSAKIQVCIPESIYQKVMEINREVEEPPKKPSAFK
10   PAIEMQNSVPNKAFELKNEQTLRADPMFPPESKQKDYEENSWDSESLCETVSQKDVCLPKATHQKEIDKINGKLEESP
     NKDGLLKATCGMKVSIPTKALELKDMQTFKAEPPGKPSAFEPATEMQKSVPNKALELKNEQTWRADEILPSESKQKDY
     EENSWDTESLCETVSQKDVCLPKAAHQKEIDKINGKLEGSPVKDGLLKANCGMKVSIPTKALELMDMQTFKAEPPEKP
     SAFEPAIEMQKSVPNKALELKNEQTLRADEILPSESKQKDYEESSWDSESLCETVSQKDVCLPKATHQKEIDKINGKL
     EESPDNDGFLKAPCRMKVSIPTKALELMDMQTFKAEPPEKPSAFEPAIEMQKSVPNKALELKNEQTLRADQMFPSESK
15   QKKVEENSWDSESLRETVSQKDVCVPKATHQKEMDKISGKLEDSTSLSKILDTVHSCERARELQKDHCEQRTGKMEQM
     KKKFCVLKKKLSEAKEIKSQLENQKVKWEQELCSVRLTLNQEEEKRRNADILNEKIREELGRIEEQHRKELEVKQQLE
     QALRIQDIELKSVESNLNQVSHTHENENYLLHENCMLKKEIAMLKLEIATLKHQYQEKENKYFEDIKILKEKNAELQM
     TLKLKEESLTKRASQYSGQLKVLIAENTMLTSKLKEKQDKEILEAEIESHHPRLASAVQDHDQIVTSRKSQEPAFHIA
     GDACLQRKMNVDVSSTIYNNEVLHQPLSEAQRKSKSLKINLNYAGDALRENTLVSEHAQRDQRETQCQMKEAEHMYQN
20   EQDNVNKHTEQQESLDQKLFQLQSKNMWLQQQLVHAHKKADNKSKITIDIHFLERKMQHHLLKEKNEEIFNYNNHLKN
     RIYQYEKEKAETENS
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